

Women's Health

and California's Future

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the WOMEN'S FOUNDATION of CALIFORNIA

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Women bear the burden of diseases triggered by environmental factors in three unique and significant ways:

- Because females have more body fat than males, their body composition and metabolism allow more fat-soluble chemicals to absorb and bersist;
- Because
 women have
 the capacity to
 bear children;
 and
- Because women are primary caretakers and make the majority of health care decisions for their families.

"For the first time in the history of the world, every human being is now subjected to contact with dangerous chemicals, from the moment of conception until death." 1

Four decades after Rachel Carson sounded this alarm in *Silent Spring*, chemical contamination is even more intractable and pervasive. Synthetic chemicals have worked their way into our water, our land, our bodies. No human is immune from environmental contamination, and women — and the children they may bear — stand to suffer the most harm. Our environment is where we live, grow, learn, work, and play; it is intimately related to our health. What we know is this: some of the chemicals released into our environment are silent killers. What we don't know is even more alarming. The few long-term studies of the toxic chemicals detected in our bodies only hint at the enormity of the danger.

The fate of children born today and in the future will be influenced not only by their parents' genes but also by the chemicals that have accumulated in each mother's body over her lifetime. Chemical exposure can affect our behavior, impair intellect, and disrupt physical functions. The Women's Foundation of California seeks to protect the future by setting in motion a plan to turn the tide. The purpose of our full report, *Confronting Toxic Contamination in Our Communities: Women's Health and California's Future*, is to expand the environmental health and justice debate to include the unique experiences and concerns of women and girls, their families, and their communities. We also aim to provide a framework for the State of California to lead the way in preventing public exposure to harmful chemicals and protecting those most at risk.

We are being lulled into believing that the chemical tide is turning. There are rivers and waterways in California that are cleaner today than they were ten years ago. Hybrid cars using a combination of gas and electric energy are selling briskly across the state. Organic foods are more readily available and are sold in farmers markets and major grocery store chains. But these small achievements may be pacifying us into complacency.

In the name of convenience, more chemicals are being introduced into more products every day. These chemicals are pervasive — used for personal hygiene, to clean our homes, control fleas on our pets, keep pests out of our gardens, and in manufacturing, cleaning, and assembling consumer products. Since the end of World War II, the production of synthetic materials has increased 350 times. The \$175 billion U.S. chemical industry is the largest in the world, accounting for 25% of all production. More than 63% of this chemical production is centered in 10 states, including California.² More than two billion pounds of pesticides are used and released into the environment every year. An estimated 85,000 synthetic chemicals are

registered for use today in the United States, and another 2,000 are added each year.³

Some of these chemicals have enhanced our lives, and many are undoubtedly beneficial, but an overwhelming majority of the synthetic chemicals in use have never been tested for their effects on human health.⁴ According to the Environmental Working Group, Americans have an average of 91 industrial compounds and pollutants in their blood and urine at all times.⁵ Chemicals are present in the home, the workplace, and in our communities.

A quick reality check to start the day: Read the labels on the moisturizer, toothpaste, baby lotion, mouthwash, shampoo, soap, sunscreen, and all the other tubes and bottles in your bathroom to identify the chemicals inside these products. Ask yourself what you know about each ingredient. Then visualize how each one enters your body through your skin, nose, and mouth.

Toxic chemicals do not just enter and exit the body; they come to stay. Some persist not just for years but for generations, passed from mothers to children. More than 100 years after prospectors used mercury to ply the California hills for gold in the 1850s, the mercury tailings they left behind are a major source of pollution in our water and in the fish we eat.⁶ Forty years after planes sprayed DDT in fields, the chemical is present in the breast milk of women.

After we have disposed of our cell phones and computers, lead and heavy metals fill our dumps and leach into our groundwater. When we pour bleach down our kitchen drains, it damages wildlife in California's bays.

Health and freedom from contamination are considered basic human rights all over the world, as several United Nations conventions affirm. One of the provisions of the International Covenant on Economic, Social and Cultural Rights includes the human right to a healthy and clean environment and sufficient, affordable, physically accessible, safe, and acceptable water for personal and domestic uses. This call to action becomes more difficult with each passing day.



PHOTO CREDIT: LISA DYAS

Women bear the burden of diseases triggered by environmental factors in three unique and significant ways:

- By influence of female body composition and metabolism. Body fat is often
 a repository for chemicals. Women have a higher percentage of body fat than
 men and naturally store more fat-soluble toxic materials, even when exposed
 to the same amounts as men. The presence of hormonally sensitive tissues in
 females is also believed to contribute to greater sensitivity to toxic chemicals.⁹
- Because women have the capacity to bear children. Women of reproductive
 age transfer a lifetime of accumulated toxins to their fetuses in utero and to
 their newborns through breast milk. According to Women Assessing the
 State of the Environment (WASTE), women's bodies are often "the markers
 of environmental contamination through diminished fertility, abnormal fetal
 development, increased rates of cancers, and other spiraling forms of
 environmental illness."10
- As family caretakers and health decision makers. The federal Office of
 Women's Health reports that women make nearly two-thirds of health care
 decisions for their family, and 83% have sole or shared responsibility for
 financial decisions regarding their family's health.¹¹ This puts women on the
 front lines to bear direct witness to and to deal with the consequences of
 the human suffering that results from environmental degradation.



PHOTO CREDIT: TINA ESHAGHPOUR, RETOUCHING: MIZ COZMA

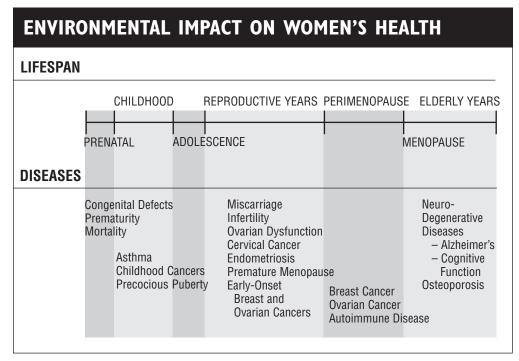
Cancer is the word we hear most often in relation to environmental contamination. Since the mid–20th century and the onset of what has been called the petrochemical age, the incidence of all types of cancer in the U.S. has risen by 49.3%. Today, about 48.2% of all men and 38.3% of all women in the country will be diagnosed with some type of cancer in their lifetime. As the second most common cause of death after heart disease, cancer accounts for one out of every four deaths in California. But cancer is only one of many diseases with scientific evidence of environmental links. Others that are suspect include:

- Asthma Approximately three million Californians have asthma, nearly 700,000 of them children. Asthma is the most common chronic disease in children and is the leading cause of school absenteeism.¹⁴
- Autism Over the past 30 years, the number of children receiving services for autism has more than doubled. According to the California Birth Defects Monitoring Program, genetic defects and exposure to toxic chemicals are likely causes for autism.¹⁵

- Impaired fertility In the U.S., between 1938 and 1990, male sperm density declined at a rate of 1.5% per year. 16 Researchers estimate this represents a 45–50% drop in total human sperm count. 17
- Birth Defects More than 16,000 babies are born in California each year with structural birth defects, having a body part that is missing or malformed.¹⁸
- Breast Cancer An estimated 21,500 women
 - had breast cancer in 2000 in California. The incidence rate for that year was 132.4 cases per 100,000 women.
- **Endometriosis** A painful reproductive and immunological illness, endometriosis is a leading cause of female infertility, chronic pelvic pain, and gynecologic surgery. It is also the cause of more than 120,000 of the 500,000 hysterectomies performed in the United States annually.¹⁹
- Learning disabilities The number of cases of learning disabilities nearly doubled from 1977 to 1994.²⁰ In California there are 347,595 students ages six to 22 who have a Specific Learning Disability.²¹ While *equal* numbers of girls and boys have been found to have reading disabilities, boys are *three times* more likely to be evaluated and treated.²²

Chronic diseases and conditions are stunting our children's ability to fully develop. Prevention is clearly the most direct, comprehensive, and economical way to attack health-related problems. Consider: for every dollar spent on childhood immunization, the health care system saves \$10. The cost of smoking one pack of cigarettes, in terms of the value of life lost, is \$35 per pack. We must apply the same full cost accounting to chemical contamination. (For a more detailed analysis of the economics of pollution, see page 26 in the full report.)

The true cost of "cheap" plastics, "convenient" cleaners, and "easy to use" disposable products is borne by the environment and the legacy we leave our unborn children. True cost accounting must include, for example, the costs of health care due to exposure to toxic chemicals rather than simply the cost of producing those chemicals. Since we are not able to accurately capture these costs, industry continues to manufacture and sell goods without absorbing the financial burden of the harm. A traditional cost—benefit analysis does not look at who is paying the cost and who is receiving the benefit.



CREDIT: Dr. Barbara J. Davis, Laboratory of Women's Health, NIEHS; Artist: Sue Edelstein, Image Associates Low-income
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Prevention will not be easy, given the massive, unchecked dumping of potentially dangerous chemicals over the last half-century. Some of the complications include:

- There is insufficient data on the potential threat of toxic chemicals.
 Minimal safety data exists for many of these compounds and almost nothing about their effects on the developing fetus and newborn baby. In a typical year, no more than two dozen chemicals are studied for their disease-causing effect. In addition, there is no safety data about how multiple chemicals might interact. This is problematic, as most human bodies carry detectable levels of 90 or more synthetic chemicals at any one time.
- Companies are not required to adequately screen new chemicals for safety before they are released onto the market. The Environmental Protection Agency (EPA) must have cause for concern before they can require testing — and they frequently do not have cause until tests are done to reveal significant problems (see full report, page 7).
- Existing scientific evidence does not always take into account variations in physiology. When performing "risk assessment," guidelines for safe chemical exposure levels are based on test results using adult males averaging 150 pounds. Women with higher body fat content, relatively smaller body size, the ability to bear children, and the hormonal changes that take place throughout their lives are typically ignored. Hormones and chemicals that affect them are of particular importance, as hormones are the body's chemical messengers. (There is an entire class of endocrine-disrupting chemicals that are distorting the body's communication network. See full report, page 9.)
- The effects of toxic substances are complex and influenced by many factors. These include what chemical, how much exposure, how a person is exposed and for how long, and how susceptible that particular person is, taking into consideration sex, age, and general health. Current federal risk assessment policies fail to fully consider the range of responses to chemical exposure within a population.
- Across California, low-income women and women of color tend to be disproportionately affected. These are the very people who do not have easy access to health care services and who are more likely to live and work in areas where the danger of exposure is high. To curtail contamination, education and prevention must reach all communities in the state.

There are organizations and people in all parts of California who are working to make our communities healthier and setting examples for people and agencies that make decisions about our future. The following are just a few of examples of the many organizations doing this work.

 Protecting Immigrant Assembly Workers — The Santa Clara Center for Occupational Safety and Health (SCCOSH) is a community-based organization that advocates for safe working conditions, offers occupational safety and health training to Silicon Valley's workforce, and coordinates public action campaigns. Recently, the organization played a pivotal role in alerting female computer manufacturing workers to the dangers of potential chemical exposure and proposed safety measures. The organization was also successful in getting trichloroethylene (TCE), a commonly used cancer-causing solvent, banned in Silicon Valley manufacturing (full story on page 8 of the report).

- Educating Neighbors about Toxic Water When it became clear that water in the town of Lindsay in the Central Valley was heavily contaminated by waste from the area's vast dairy farms, the Migrant Photography Project, a grassroots women's organization, created a water initiative called "Water: The Right To Know/El Agua: el Derecho de Saber." The Photography Project developed materials including images and personal interviews to educate the community. Project members are also beginning to collaborate with scientists to collect and test their water to truly understand what it contains (full story on page 11 of the report).
- Mobilizing to Protect Non-English-speaking Neighbors In 1999 in Richmond, a series of chemical explosions at the Chevron oil refinery jeopardized the health of the entire community. The county's emergency response system broadcast only in English, leaving a large population of non-English speakers — many of them Southeast Asian immigrants — unaware of the danger they faced outside their homes. A group of predominantly Laotian grandmothers began a public action movement called the Warning System Campaign with the assistance of the *Asian*

Pacific Environmental Network (APEN) and fought for the implementation of a multilingual emergency phone-alert system that broadcasts in many languages, including Laotian, Hmong, Mien, and Khmu (full story on page 38 of the report).

Grassroots community organizations, the government, and private agencies are launching a united effort for broader, systemic change. To create a healthy state and lead the way for the nation, the Women's Foundation of California makes the following five key policy recommendations to California legislators and other decision makers and to citizens and community action groups:

RECOMMENDATION I: ADOPT A 'FIRST DO NO HARM' APPROACH

Recognizing that cause and effect relationships are very difficult to establish, public policy decisions should first do no harm and be made based on evidence that products or projects will not harm those who are most vulnerable (often women and girls). Manufacturers, corporations,



builders, and developers should aspire to prevent or minimize harm to humans and the environment. With an emphasis on precaution, we would no longer wait for harm to appear but take action before irrevocable damage has been done. The burden of proof of safety should be shifted to those proponents of projects or manufacturers of products before they receive permission to move forward with their work. All the while, we must remember that, according to the California EPA, "recommendations to enhance precaution should not be interpreted to mean a guarantee of zero risk — or a mandate to act without credible threat of harm" (see full report, page 31).

RECOMMENDATION 2: IMPROVE RESEARCH AND DATA COLLECTION

We have many indications that chemical exposure leads to disease and debilitation, but we do not yet have the research and scientific evidence to draw exact conclusions. Most of the chemicals we use in our everyday lives remain untested. Many of the exposure assessment and risk assessment tests that have been performed do not take into account gender, age, geographic location, or other demographic differences. We propose that **government agencies and research organizations support research that examines the role of gender in environmental exposure; expand efforts to monitor human exposure to toxic chemicals and their long-term impacts; and fund research that traces the health impacts of multiple exposures. Improved tracking will allow us to better understand what we are exposed to and how these toxins impact health (see full report, page 32).**



PHOTO CREDIT: ROBERT DAWSON

RECOMMENDATION 3: PROMOTE SAFER ALTERNATIVES

While Right to Know legislation and other types of information dissemination are critical, we need to take the next step to promoting less toxic, healthy alternatives. Community members, scientists, health professionals, workers, and educators can take steps to reduce exposure to hazardous toxins and promote safe alternatives to materials and practices that cause harm to human health and the environment. We must support government and business in this endeavor, and ensure that better alternatives are accessible and affordable to low-income women and their communities. Simultaneously, we need to support research into non- or less-toxic alternatives to current harmful chemicals (see full report, page 34).

RECOMMENDATION 4: SUPPORT POLICY ADVOCACY AND MULTI-SECTORAL COLLABORATION

To succeed in the endeavor of creating a healthier place to live, we need to join forces and strengthen the public's capacity to build healthy communities. To effectively change current environmental health policies, funders must invest in a range of actions that include public education, community organizing, policy advocacy, litigation, and leadership development in communities throughout California. One fundamental and yet often overlooked opportunity is to link the agenda of the environmental movement with that of environmental justice organizations, as well as with other allies from health organizations, labor unions, educators, and advocates for women, children, families, and immigrants. The opportunity for collaboration between historically "unlikely" partners is critical to the long-term success of this effort (see full report, page 35).

RECOMMENDATION 5: Assume Leadership TO CREATE HEALTHIER SOLUTIONS AND CLEAN UP EXISTING CONTAMINATION

It is important to recognize and protect economic vitality in California and the nation, but equal weight must be given to protecting our communities from harm or the risk of harm from chemical exposure. In the long run, you cannot have one without the other. Today, taxpayers are bearing an increasing burden of toxic clean-up costs. Taxpayers' resources should be invested in implementing and enforcing existing environmental laws and helping to support healthier choices. Incentives to produce environmentally-safe products will be created by requiring producers to bear the true costs of their products. Manufacturers and industrial users of chemicals should assume responsibility for — as well as pay the costs of — environmental cleanup and take part in crafting solutions (see full report, page 37).

TAKING THE LEAD: CALIFORNIA IS A NATIONAL LEADER FOR CHANGE

The sheer magnitude of California's geography and population means policies adopted in California carry national implications. It is crucial to consider international effects, as chemical exposure does not stop at borders. Pesticides from China and South America are found in weather bursts over the United States, and air pollution from factories in Mexico affects children in San Diego.

When California required a reduction in fuel emissions from passenger cars, national and international auto makers could not afford to ignore this mandate and thus began designing and producing cleaner cars. Industry, other state governments, and the federal government closely monitor legislation in California. Here are just a few success stories where California is leading the way:

California established the first organic law (statutory authority) in 1978.
 California Certified Organic Farmers (CCOF) was founded in 1974 as one of the first organic certification organizations in the nation.

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- In 2001, California became the **first state to ban** thermometers, novelty items, and other **products containing mercury** a neurotoxin that has been linked to tremors, impaired vision and hearing, paralysis, insomnia, infertility, and heart attacks (see full report, page 20).
- Passage of Proposition 65 (see chart in full report on page 42) in 1986 prompted industry to reformulate their products to remove chemicals requiring public warnings. This benefited not only Californians but also consumers nationwide. Prop. 65 remains one of the only state laws in the nation that has the effect of actually reducing exposures to toxic chemicals.
- A California ban on the manufacturing, distribution and sale of polybrominated dipheyl ethers (PBDEs) adopted in 2003 will likely force chemical companies nationwide to find alternatives (see full report, page 18).
- In 2003, San Francisco became the first city in the U.S. to name the Precautionary Principle as the guiding ethic in its policymaking (see full report, page 30).

The tide can be turned; the time to begin is now.

If we hope to protect women's, and therefore the future's, health and the environment, California's leaders must develop and implement a dynamic and progressive approach to environmental policy. The starting point for such a policy must be a vision of how the future can and will look following a major paradigm shift. The vision assures all people, regardless of gender, socio-economics, race/ethnicity or geography, the right to:

- Clean air and water;
- Safe, healthy and affordable food;
- Sustainable, toxic-free workplaces, neighborhoods, and schools; and
- A life without a body burden of toxic substances so that we are free from the fear of transferring toxins in utero and to newborns.

In our full report, readers will find greatly expanded information on:

- The unique role that women play due to their potential childbearing capacity, and as workers, community leaders, and caretakers of their families.
- The current health climate, including how toxic chemicals can accumulate in the human body, regulatory limitations, and evidence that links toxicants to specific diseases.
- How women are exposed in different spheres of life at home, at work, in the larger community, and from fetus to grave.
- The shortcomings of science: why technology is not protecting you.
- The financial burden of pollution: how much it really costs to ignore these problems.
- Why California needs to lead the way to a healthier planet.
- Our five policy recommendations with action steps to shape the future.

To obtain a copy of the full report *Confronting Toxic Contamination in Our Communities: Women's Health and California's Future*, see www.womensfoundca.org/publications.html.

The Women's Foundation of California <www.womensfoundca.org> is the first and largest women's foundation in the West. The Foundation's **Initiatives Forum** is the West Coast's first policy action fund for women and girls. The Foundation has chosen *Women, Health and Environment* as one focus of its Initiatives Forum — to support organizations led by women and girls that are improving environmental conditions affecting women and their families where they live, work, and play. In addition to grantmaking, the Foundation hosts strategic gatherings to build new alliances between activist groups and other sectors of our society.

ACKNOWLEDGMENTS

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